

This listing of claims. dated 10/25/2005, will replace all prior versions, and listings, of claims in the application.

Listing of Claims:

1. (canceled):

2. (canceled)

3. (currently amended): ~~The A shutter-shield system, as defined in claim 2 wherein~~ for reducing potential human risk of cumulative effects from extraneous x-radiation, applied to a collimator including a collimator housing configured with a fixed working aperture and deployed in conjunction with an x-ray tube for a designated inspection purpose conducted totally within an overall shield housing, comprising;

a shutter-shield plate configured with a shutter aperture made generally similar to the fixed working aperture in size and shape;

a shutter support structure made and arranged to retain said shield shutter plate constrained with ability to shift within a predetermined travel range between (1) an open-shutter condition wherein the shutter aperture is aligned with the fixed working aperture so as to allow x-radiation through a thus combined aperture for the designated inspection purpose and (2) a closed-shutter condition for standby purposes wherein offset displacement of the shutter-shield plate causes the shutter aperture to be similarly displaced offset from the fixed working aperture so as to in effect close the combined aperture and thus substantially contain x-ray radiation within a region of the collimator housing bounded by the shutter-shield plate; and

a drive mechanism attached to the collimator and operationally connected to said shutter-shield plate, made and arranged to actuate transition between the two shutter conditions

in response to a control signal, said drive mechanism comprises comprising:

an electrical solenoid, having a plunger operationally connected to said shutter-shield plate; and

spring biasing means, operationally connected to said shutter-shield plate, made and arranged to urge the said shutter-shield plate to move to a first end of the travel range whenever the said electrical solenoid is not powered; and

~~an, said electrical solenoid having a plunger operationally connected to said shutter-shield plate, being~~ made and arranged to urge the said shutter-shield plate to move to a second end of the travel range, opposite the first end, whenever the said electrical solenoid is powered.

4. (original): The shutter-shield system as defined in claim 3 wherein said shutter-shield plate is configured with the shutter aperture located in a manner to deploy the open-shutter condition at the first end of the travel range, i.e. whenever the solenoid is not powered, and to deploy the closed-shutter condition at the second end of the travel range, i.e. whenever the solenoid is powered.

5. (original): The shutter-shield system as defined in claim 3 wherein said spring biasing means comprises at least one coil spring having a first end attached to said shutter-shield plate and having a second end, opposite the first end, attached to the collimator housing.

6. (currently amended): The shutter-shield system as defined in claim ~~1~~ 3 further comprising:

a pair of ball-bearing slide assemblies, each having a first member attached to said shutter-shield plate and a second member attached to the collimator housing, made and arranged to provide said shutter-shield plate with freedom of movement, but only in a

predetermined linear direction and within the predetermined travel range.